

Appendix table 8—World wheat trade as a share of production; world stocks as a share of consumption; U.S. exports as a share of foreign consumption, 1960-94

Year	World trade ¹ to world production ²	World stocks to world consumption ²	U.S. exports to foreign consumption ³
<i>Percent</i>			
1960	18	36	8
1961	21	30	9
1962	18	32	8
1963	25	30	10
1964	19	31	8
1965	24	22	9
1966	19	32	8
1967	17	35	8
1968	14	40	5
1969	16	32	5
1970	18	24	6
1971	15	27	5
1972	21	21	10
1973	17	23	9
1974	18	23	8
1975	19	25	10
1976	15	34	7
1977	19	28	8
1978	16	33	8
1979	21	28	9
1980	22	26	10
1981	23	26	12
1982	21	29	9
1983	21	31	9
1984	21	34	8
1985	17	35	5
1986	17	35	6
1987	23	29	9
1988	21	23	8
1989	19	23	7
1990	17	26	5
1991	20	23	7
1992	20	27	7
1993	18	25	6
1994 ⁴	18	21	6

¹Trade data excludes intra-EC trade and represents July/June year.

²Production, consumption, and stock data represents a summation of each country's different marketing year.

³U.S. exports represent July/June marketing year.

⁴Projected as of November 9, 1994.

Source: (29).

Appendix table 9—Wheat production and exports, major foreign exporters, and total foreign, 1965-94¹

Year	Australia ²		Canada ²		Argentina ²		EC-12 ²		Foreign ³	
	Production	Exports	Production	Exports	Production	Exports	Production	Exports	Production	Exports
<i>Million bushels</i>										
1965	260	172	649	585	223	205	1,641	252	8,245	1,392
1966	467	312	827	515	230	82	1,441	215	9,732	1,375
1967	277	208	593	336	269	81	1,698	271	9,220	1,203
1968	544	234	650	306	211	92	1,718	341	10,340	1,303
1969	387	296	671	346	258	85	1,635	383	9,728	1,448
1970	290	336	332	435	181	36	1,595	220	9,911	1,334
1971	316	286	530	504	209	60	1,867	337	11,026	1,461
1972	242	157	533	577	254	117	1,879	446	10,854	1,515
1973	440	258	594	419	241	58	1,857	436	11,740	1,465
1974	417	315	489	395	219	66	2,053	454	11,270	1,496
1975	440	318	628	450	315	116	1,757	536	10,831	1,545
1976	434	349	867	494	404	217	1,811	404	13,076	1,652
1977	344	298	730	588	209	65	1,742	467	11,838	1,651
1978	665	430	777	480	298	150	2,148	566	14,353	1,893
1979	595	485	631	584	298	175	2,068	658	13,237	2,053
1980	399	352	709	598	286	141	2,375	798	13,649	2,047
1981	601	404	911	678	305	134	2,243	823	13,567	2,190
1982	326	295	982	785	551	363	2,476	807	14,607	2,451
1983	809	501	972	800	468	288	2,474	824	15,377	2,623
1984	686	516	779	645	485	346	3,198	1,046	16,107	2,809
1985	594	589	891	650	312	158	2,776	1,023	15,759	2,616
1986	592	572	1,152	764	328	163	2,801	1,028	17,168	2,759
1987	454	362	953	864	323	136	2,774	1,076	16,116	2,941
1988	517	415	585	457	309	148	2,880	1,185	16,377	2,800
1989	522	396	911	620	373	223	3,015	1,247	17,554	2,995
1990	554	432	1,179	798	401	205	3,113	1,250	18,875	3,248
1991	388	261	1,174	900	363	212	3,322	1,312	17,955	3,198
1992	595	362	1,098	724	360	215	3,115	1,391	18,173	3,200
1993	621	503	1,001	702	345	169	2,950	1,263	18,129	3,056
1994 ⁴	305	184	852	753	386	209	3,038	1,196	17,027	2,765

¹Includes intra-EC trade.²Data reflect country's crop year.³Aggregate of differing local marketing years.⁴Projected as of November 9, 1994.

Source: (29).

Appendix table 10—Coefficients of variation for U.S. wheat, 1951-94¹

Period ²	Harvested acres	Yield	Production	Exports	Price received ³	Value of production
<i>Percent</i>						
1951-55	16.1	7.8	14.5	31.5	2.8	15.3
1956-60	7.4	13.5	18.6	17.9	6.0	13.9
1961-65	6.8	3.8	7.7	11.7	18.4	12.0
1966-70	11.7	8.4	7.3	15.2	11.6	8.0
1971-75	17.9	8.1	12.8	23.9	44.0	50.0
1976-80	9.4	5.4	10.4	17.8	22.4	30.0
1981-85	12.0	5.7	6.8	22.2	6.5	11.9
1986-90	10.3	7.9	16.0	19.3	21.7	17.2
1991-94 ⁴	3.8	5.9	9.4	4.3	5.7	13.4

¹Coefficient of variation, a measure of variability, equals the standard deviation divided by the mean.

²June/May year.

³Season average price received by farmers.

⁴Values for 1994 were projected as of November 9, 1994.

Source: (26).

Appendix table 11—U.S. wheat exports by selected export programs

Fiscal year	P.L. 480	Section 416	-----1,000 metric tons-----			Total U.S. exports	P.L. 480, CCC credit, and EEP divided by total exports ³
			Total aid	CCC credit ¹	EEP ²		
1955	2,325	0	2,325	0	0	6,184	38
1956	4,730	0	4,730	26	0	8,032	59
1957	8,126	0	8,126	0	0	12,934	63
1958	5,407	0	5,407	0	0	8,793	61
1959	6,883	0	6,883	76	0	9,839	71
1960	8,585	0	8,585	8	0	11,386	75
1961	10,112	0	10,112	129	0	15,273	67
1962	11,379	0	11,379	140	0	16,549	70
1963	11,210	0	11,210	260	0	14,557	79
1964	11,213	0	11,213	398	0	20,538	57
1965	13,415	0	13,415	94	0	17,300	78
1966	12,779	0	12,779	533	0	21,379	62
1967	7,074	0	7,074	1,529	0	18,120	47
1968	9,369	0	9,369	846	0	17,193	59
1969	5,216	0	5,216	324	0	12,501	44
1970	5,776	0	5,776	802	0	15,688	42
1971	5,067	0	5,067	2,113	0	18,227	39
1972	5,178	0	5,178	1,966	0	17,070	42
1973	2,947	0	2,947	8,748	0	35,867	33
1974	859	0	859	1,483	0	26,756	9
1975	2,795	0	2,795	155	0	29,272	10
1976	2,690	0	2,690	1,455	0	29,874	14
1977	3,495	0	3,495	2,252	0	23,766	24
1978	3,002	0	3,002	3,813	0	31,813	21
1979	3,234	0	3,234	2,684	0	31,340	19
1980	2,785	0	2,785	1,945	0	36,066	13
1981	2,537	0	2,537	3,261	0	42,246	14
1982	2,978	0	2,978	3,725	0	44,607	15
1983	3,340	0	3,340	8,597	0	36,701	33
1984	3,442	0	3,442	11,406	0	41,699	36
1985	4,392	0	4,392	8,221	0	28,524	44
1986	4,685	76	4,761	7,740	4,916	24,626	59
1987	3,927	406	4,333	8,125	12,214	28,204	68
1988	3,321	1,186	4,507	9,273	26,679	40,523	82
1989	3,020	137	3,157	8,897	17,906	37,660	68
1990	2,985	0	2,985	7,759	12,806	28,064	70
1991	3,067	0	3,067	8,339	15,150	26,792	78
1992	2,820	0	2,820	13,334	21,111	34,322	78
1993	2,818	868	3,686	8,537	21,806	36,078	78

¹Source: FAS/USDA.

²Unofficial ERS/FAS estimates of shipments.

³Adjusted for overlap between CCC export credit and EEP shipments.

Appendix table 12—U.S. wheat production costs and returns, 1980-94

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993F	1994F
<i>Dollars per planted acre</i>															
Production cash costs and returns:															
Gross value of production (excluding direct government payments):															
Wheat	112.41	114.35	110.32	128.52	113.97	93.52	66.06	76.21	95.89	99.90	94.27	72.68	112.08	NA	NA
Wheat straw ¹	4.07	4.61	4.37	4.45	4.48	2.48	2.06	2.18	3.78	3.45	1.52	1.21	1.37	NA	NA
Total, gross value of production	116.48	118.96	114.69	132.97	118.45	96.00	68.12	78.39	99.67	103.35	95.79	73.89	113.49	NA	NA
Cash expenses:															
Seed	6.51	7.19	6.65	6.37	6.48	7.59	7.29	6.62	6.69	7.68	7.69	5.87	6.67	NA	NA
Fertilizer, lime, and gypsum	13.86	17.61	17.56	18.36	18.37	15.91	14.53	13.07	15.34	16.70	14.59	15.30	14.46	NA	NA
Chemicals	2.23	2.41	3.16	3.27	3.19	4.26	4.06	3.82	3.82	5.02	5.45	5.73	6.15	NA	NA
Custom operations ²	2.94	4.54	5.86	6.02	6.04	4.17	4.12	4.12	3.89	4.11	4.56	4.25	4.24	NA	NA
Fuel, lube, and electricity	10.62	12.33	11.77	11.06	9.54	9.93	6.74	7.56	7.37	7.96	8.72	8.96	8.81	NA	NA
Repairs	7.23	7.80	7.18	7.77	7.49	6.56	6.17	6.32	6.41	6.39	6.51	6.70	7.22	NA	NA
Hired labor	2.88	3.00	3.02	3.21	3.15	2.43	2.54	2.53	2.59	4.95	4.92	5.34	5.52	NA	NA
Other variable cash expenses ³	0.49	0.41	0.82	0.71	0.75	0.25	0.22	0.20	0.20	0.20	0.20	0.18	0.20	NA	NA
Total, variable cash expenses	46.76	55.29	56.03	56.77	55.01	51.10	45.67	45.67	44.24	53.01	52.64	52.33	53.27	53.91	55.12
General farm overhead	7.08	7.39	7.11	8.05	8.62	5.10	4.69	6.01	6.89	5.01	6.47	5.15	4.97	NA	NA
Taxes and insurance	7.33	7.39	6.90	7.69	7.86	7.44	7.92	8.11	8.19	8.72	10.28	8.88	8.07	NA	NA
Interest	14.58	19.81	18.45	21.86	22.98	12.69	9.08	10.09	9.57	8.77	9.56	9.12	7.77	NA	NA
Total, fixed cash expenses	28.99	34.59	32.46	37.60	39.46	25.23	21.69	24.21	24.65	22.50	26.31	23.15	20.81	20.99	21.56
Total, cash expenses	75.75	89.88	88.49	94.37	94.47	76.33	67.36	69.88	68.89	75.51	78.95	75.48	74.08	74.90	76.69
Gross value of production less cash expenses	40.73	29.08	26.20	38.60	23.98	19.67	0.76	8.51	30.78	27.84	16.84	-1.59	39.41	NA	NA
<i>Dollars per bushel</i>															
Harvest-period price	3.76	3.63	3.38	3.48	3.37	2.98	2.29	2.39	3.50	3.81	2.78	2.57	3.32	NA	NA
<i>Bushels per planted acre</i>															
Yield	29.87	31.47	32.64	36.89	33.79	31.41	28.79	31.87	27.42	26.22	33.91	28.28	33.77	NA	NA

See footnotes at end of table

Continued--

Appendix table 12—U.S. wheat production costs and returns, 1980-94—Continued

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993F	1994F
<i>Dollars per planted acre</i>															
Production returns and economic costs:															
Gross value of production															
(excluding direct government payments):															
Wheat	112.41	114.35	110.32	128.52	113.97	93.52	66.06	76.21	95.89	99.90	94.27	72.68	112.12	NA	NA
Wheat straw	4.07	4.61	4.37	4.45	4.48	2.48	2.06	2.18	3.78	3.45	1.52	1.21	1.37	NA	NA
Total, gross value of production	116.48	118.96	114.69	132.97	118.45	96.00	68.12	78.39	99.67	103.35	95.79	73.89	113.49	NA	NA
Economic (full ownership) costs:															
Variable cash expenses	46.76	55.29	56.03	56.77	55.01	51.10	45.67	45.67	44.24	53.01	52.64	52.33	53.27	53.91	55.12
General farm overhead	7.08	7.39	7.11	8.05	8.62	5.10	4.69	6.01	6.89	5.01	6.47	5.15	4.97	NA	NA
Taxes and insurance	7.33	7.39	6.90	7.69	7.86	7.44	7.92	8.11	8.19	8.72	10.28	8.88	8.07	NA	NA
Capital replacement	18.15	19.30	19.41	21.02	20.48	19.63	19.90	20.33	20.67	9.66	9.89	10.60	10.93	NA	NA
Operating capital	2.83	3.91	3.09	2.51	2.72	2.11	1.38	1.46	1.78	2.12	1.97	1.42	0.95	NA	NA
Other nonland capital	3.64	3.46	3.24	3.19	3.84	3.67	3.66	3.69	4.33	9.67	10.67	12.18	13.30	NA	NA
Land	30.06	29.44	29.75	34.41	29.78	30.81	23.30	24.87	31.38	47.57	46.33	33.92	49.18	NA	NA
Unpaid labor	6.40	6.67	6.72	7.14	7.01	5.40	5.66	5.63	5.77	8.67	11.24	9.48	10.00	NA	NA
Total, economic (full ownership) costs	122.25	132.85	132.25	140.78	135.31	125.26	112.18	115.77	123.25	144.43	149.49	133.96	150.67	149.80	153.79
Residual returns to management and risk	-5.77	-13.89	-17.56	-7.81	-16.86	-29.26	-44.06	-37.38	-23.58	-41.08	-53.70	-60.07	-37.18	NA	NA
<i>Dollars per bushel</i>															
Harvest-period price	3.76	3.63	3.38	3.48	3.37	2.98	2.29	2.39	3.50	3.81	2.78	2.57	3.32	NA	NA
<i>Bushels per planted acre</i>															
Yield	29.87	31.47	32.64	36.89	33.79	31.41	28.79	31.87	27.42	26.22	33.91	28.28	33.77	NA	NA

F = Forecasts as of fall of 1994. (Contact Mir Ali, 202-219-0802).

NA = Not available.

¹Includes value of wheat grazing in Southern Plains before 1985.

²Includes cost of technical services.

³Includes cost of purchased irrigation water.

Source: (23).

SUMMARY OF REPORT #AER-714

The 1995 Farm Bill

Planting Flexibility and Acreage Idling Are Key Issues for Feed Grains

April 1995

Contact: William Lin (202) 219-0848

Key issues to be addressed in the feed grains portion of this year's farm legislation deliberations include planting flexibility and acreage idling under both the Conservation Reserve Program (CRP) and the Acreage Reduction Program (ARP). These and other policy matters are discussed in detail in **Feed Grains: Background for 1995 Farm Legislation**, a new report from USDA's Economic Research Service.

Policy options in regard to the planting flexibility issue include (1) expanding the normal flex acreage beyond the current 15 percent, (2) combining all crop acreage base into a farm program base and allowing complete planting flexibility within the base, and (3) implementing a normal crop acreage concept, such as the one under the 1977 Farm Act.

Options for the CRP include extending the current program for another 10-15 years but under more critical criteria to reduce soil and wind erosion and to preserve water quality and other environmental benefits.

Policy decisions that continue to hold land out of production will be critical given expectations for continued growth in both domestic use and exports. However, the program cost is likely to be the dominant criterion for legislation.

Producers benefit from participating in the government feed grains program directly through support prices and direct payments and indirectly through higher market prices. U.S. feed grain farmers have received program payments since 1961. During 1991-93, direct payments as a percentage of annual gross income were in ranges of 12-17 percent for corn, 19-22 percent for sorghum, 24-31 percent for barley, and 18-25 percent for oats. These percentages were well under those much of the 1980's. In 1986-88, for example, direct payments were 25-37 percent of annual gross income from corn production. Deficiency payments averaged \$5.5 billion for feed grain producers during that late-1980's period, compared with \$2.8 billion during 1991-93.

During 1991-93, returns over cash expenses for corn producers averaged \$0.66 per bushel (in 1987 dollars), compared with \$0.71 in 1985 and \$0.86 in 1990. However, returns over cash expenses for corn producers were still the highest among feed grain producers on a per acre basis. Overall, returns over cash expenses are expected to improve considerably in 1994/95 because of record yields, greater domestic and export demands, and higher deficiency payments.

The U.S. Feed Grain Industry. U.S. feed grain production has trended upward since the 1930's, reaching a record 285 million metric tons in 1994/95. Much of the increase was due to yield improvements, especially for corn. Corn production increased from 5.8 billion bushels in 1975 to 10.1 billion bushels in 1994. However, acres planted to sorghum, barley, and oats have declined.

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The information presented here is excerpted from **Feed Grains: Background for 1995 Farm Legislation**, AER-714, by William Lin, Peter Riley, and Sam Evans. The cost is \$12.00.

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